

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Canceled).

Claim 8 (Currently Amended): An apparatus for ~~forming image forming data to be reproduced~~ defining and at least partially correcting errors of an image reproduction system, said errors being deviations between an image of predetermined quality and its reproduction, said errors being caused by defects related to color channels in the image reproduction system, comprising:

image inputting means feeding  $N^2$  neuronal nets for N color channels, with output of the neuronal nets being added and connected to inputs of an image reproduction device for correction of said N color channels;

neuronal nets spatially coupling pixel values of different color channels of image data to be reproduced by mono-

layered neuronal networks via space-variant weights, implemented on a predetermined circuit, comprising parameters established by a learning process on the basis of a reproduced test image of predetermined quality,

~~image inputting means feeding N<sup>2</sup> neuronal nets for N color channels, with output of the neuronal nets being added and connected to inputs of an image reproduction device;~~

a storage for image data to be reproduced that connects to inputs of the neuronal nets and feeds the pixel values of different color channels to the inputs of the neuronal nets as target data; and

an image recording device, for generating digital data of an uncorrected image of a test image provided by the image reproduction device, connected to the inputs of the neuronal nets during the learning process for defining the parameters of the neuronal nets.

Claims 9-14: Canceled.

Claim 15 (Currently Amended): The method of claim ~~12~~ 17,

further comprising the steps of:

deriving target data for the neuronal nets from digitized data of an original image to be reproduced;

capturing a reproduced uncorrected test image by an image recording device; and

training the neuronal nets with data produced by said image recording device and said target data.

Claim 16 (Currently Amended): The method of claim ~~12~~ 17, further comprising the step of determining parameters of the neuronal nets from values derived from an image recording system with a quality of image formation greater than the quality of the image reproduction system to be corrected, if the errors to be corrected are larger than the device-by-device variances of the image defects to be corrected.

Claim 17 (New): A method of defining and at least partially correcting errors of an image reproduction system, said errors being deviations between an image of predetermined quality and its reproduction, such errors being caused by defects in the

image reproduction system, the method comprising the steps of:

feeding image data to be reproduced to  $N^2$  neuronal nets as target data, wherein the errors are related to color channels and wherein the correction of  $N$  color channels requires adding the outputs of said  $N^2$  neuronal nets;

spatially coupling the pixel values of color channels by mono-layered neuronal networks via space-variant weights;

determining the parameters of a neuronal net by a learning process utilizing the image captured by an image recording device of a reproduced test image of predetermined quality as a learning pattern; and

operating an image reproduction device on the basis of the data processed by the neuronal net implemented by a computer or a specific circuit.